

Abstract of the Disclosure

A plasticating screw having a feed section, barrier melting section, reorientation section and metering section disposed sequentially downstream wherein solid material is moved from a trail side of a main flight to a push side of the main flight in the reorientation section. The reorientation of solids is accomplished by discontinuing a barrier flight at a terminal end of said barrier melting section. The main flight decreases its pitch and continues into the reorientation section, which has a longitudinal length at least 360° about the screw axis. A melt channel and solids channel in said barrier melting section merge into a substantially uniform reorientation channel in the reorientation section so that solid plastic material conveyed along the reorientation section moves toward the push side of the main flight. A secondary flight is disposed in the metering section intermediate the main flight, whereby solids conveyed along the metering section are positioned primarily adjacent the push side of the main flight and melt is positioned primarily adjacent the trailing side.